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(71)Applicant : INTERNATL BUSINESS MACH CORP
<IBM>

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(72)Inventor : BARNES MICHAEL S
WESTERFIELD JR ROBERT P

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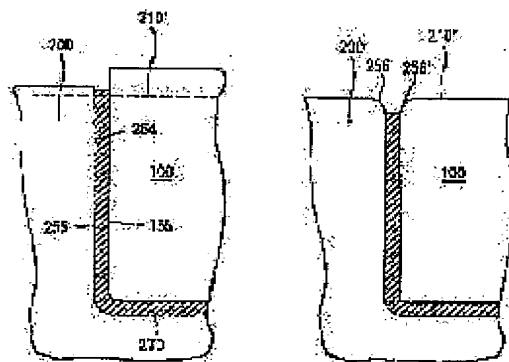
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(54) MANUFACTURE OF ELECTROSTATIC CHUCK DEVICE

(57)Abstract:

PURPOSE: To provide high clamping force on a work piece, while insulating destruction resistance between electrodes is improved by mechanically working element parts, partially and anodically oxidizing them, giving an insulating surface to the non-contact surface part of a wafer, mechanically working a top face adjacent to the work piece and giving roundness to the corners of the electrodes.

CONSTITUTION: The external dimensions of electrodes 100 and 200 are roughly and mechanically worked, and a recessed part 270 is finished by machine work. Vertical surfaces 155 and 255 and the base of the electrode 100 are finished by machine work. The top faces of the electrodes 100 and 200 are masked, and the vertical surfaces 155 and 255 are anodically oxidized. The hard coat which is anodically oxidized of the base is removed as necessary, plunge cut, and the electrodes 100 and 200 are adhered. Then, roundnesses 256 and 256' are mechanically worked and are plunge-cut. Thus, discharge between the electrodes having roundness at the corners of the electrodes is suppressed and insulating destruction voltage is improved. Consequently, electrostatic attractive force on the lower surface of the work piece and high clamping force can be obtained in an outer edge electric field, extending to the work piece from a capacitor formed by the electrodes 100 and 200.



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